

## **Exploitation Algorithm Development and Validation Monthly Progress Report: June 2019**

Contract Number: N00014-19-C-2032  
Project Title: Exploitation Algorithm Development and Validation  
Total Contract Amount: \$4,999,701.00  
Total Funded Amount: \$ (b) (4)  
Controlling DoD Office Name: Office of Naval Research  
Controlling DoD Office Address: 875 N. Randolph St., Arlington VA 22217  
Performing Organization Name: MDA Information Systems  
Performing Organization Address: 1200 Joe Hall Drive, Ypsilanti MI 48197  
Period Covered in this Report: 1 June 2019 – 30 June 2019

Costs Incurred in this Period: \$ (b) (4)  
Costs Incurred to Date: \$ (b) (4)  
Estimated Cost to Complete Funded Tasks: \$ (b) (4)

### **Schedule of Near Term Deliverables:**

Quarterly Project Review	09/05/2019
Quarterly Project Review	12/05/2019

### **Anticipated Problems and Actions Required:**

(b) (4)

### **Progress and Major Accomplishments**

Figure 1 shows the costs to date. The blue line is the amount funded to date; the green dot/line is actual cumulative costs to date.

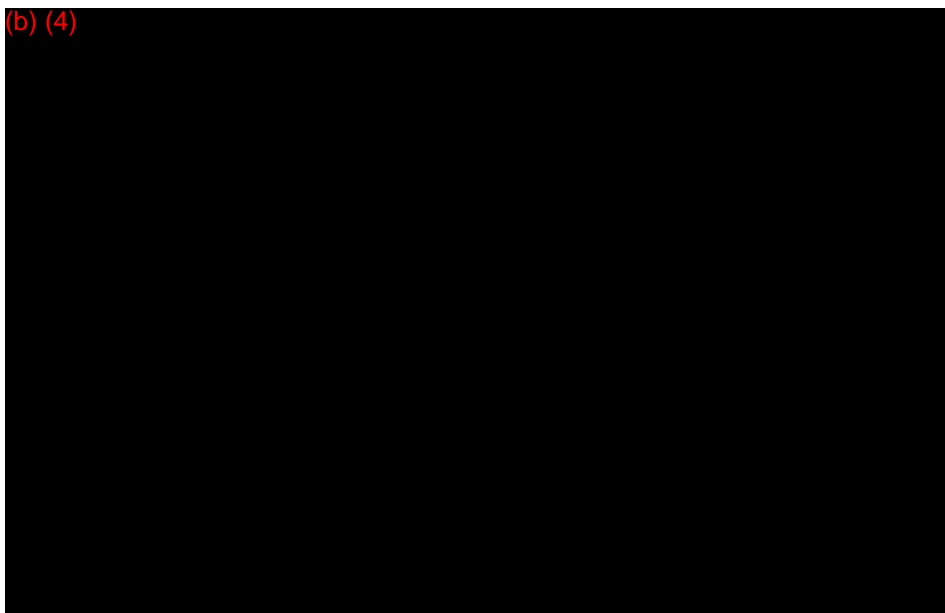


Figure 1: Costs to date. Blue line is the amount funded to date. Green dot/line is actual cumulative costs to date.

This is the first monthly report for this contract which is a follow-on to N00014-16-C-3013. The work initially performed on this contract will continue some tasks started under the prior effort.

The general categories of work described in the SOW are:

- Improvement to existing algorithms to address capability gaps discovered during operational use;
- Development of new algorithms to extract additional environmental and obstacle information from an expanded set of remote sensing systems;
- Implementation of the algorithms onto airborne platforms and incorporation into their ground station systems;
- Application of deep learning solutions for improved algorithm performance;
- Development and validation of image simulations and models to support algorithm evaluation; and
- Support to sponsor and operational units in utilizing the algorithms to attain mission goals.

We will describe work performed each month for each of these general categories below.

### **Algorithm Improvements**

(b)(4)

A large rectangular area of the document is completely blacked out, indicating redacted content.

(b)(4)

A large rectangular area of the document is completely blacked out, indicating redacted content.

(b)(4)

A rectangular area of the document is completely blacked out, indicating redacted content.

### **New Algorithm Development**

(b)(4)

A large rectangular area of the document is completely blacked out, indicating redacted content.

(b)(4)



(b)(4)



(b)(4)



(b)(4)



(b)(4)



(b)(4)



(b)(4)



(b)(4)



(b)(4)



### **Airborne and Ground System Implementation**

(b)(4)



### **Deep Learning Solutions**

(b)(4)



### **Image Simulation and Modeling**

(b)(4)



### **Operational Support**

(b)(4)

